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INSTALLATION OF CHROMIS POS WITH MYSQL OR MARIADB DATABASE.
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This is an alternative installation guide of Chromis POS on Linux. Note that there is an official installation guide published by Chromis:
https://sourceforge.net/projects/chromispos/files/User%20Guides/Linux%20Installation%20-%20Guide.pdf/download

Introduction.

Operating System used: Linux, Debian Buster (testing).
Desktop environment: KDE.

The goal is to install Chromis POS and make it work with a MySQL / MariaDB database. We'll also use OpenJDK instead of the original java libraries from Oracle.

Note: If you just want to install Chromis POS with a simple Derby database, skip section 1 and go directly to section 2. Also, in section 3, choose 'Derby' database engine when asked during the installation. When you start Chromis POS for the first time you'll be asked to create a working database, then click on 'Yes'. And that's it.

Index

1. Installation of databases
    1.A. Installation of mariadb and phpmyadmin packages
    1.B. mysql_secure_installation
    1.C. Basic commands
    1.D. Granting privileges to the user 'phpmyadmin'
    1.E. Creation of database for Chromis POS
2. Installation of java libraries
3. Execution of Chromis POS installer
4. Database setup

1. INSTALLATION OF DATABASES

Layers:

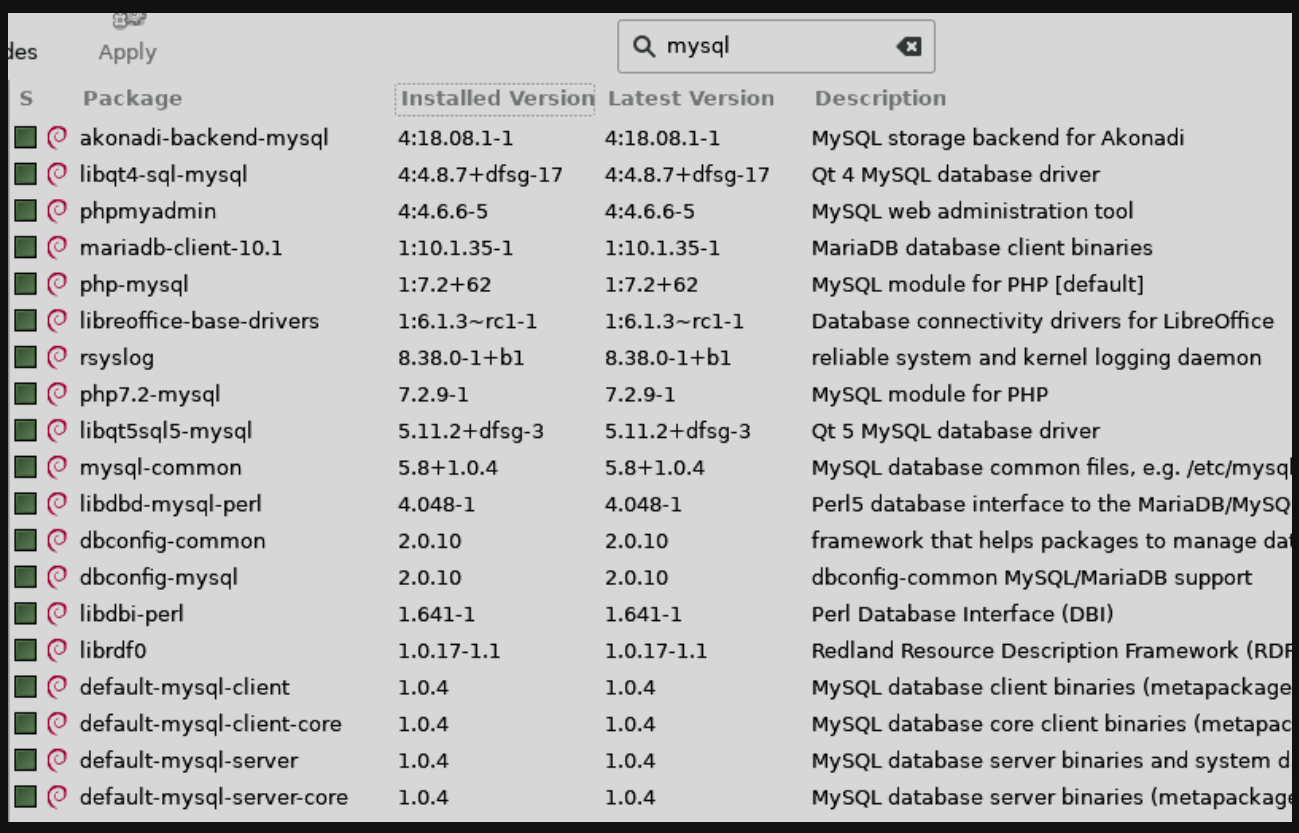
3rd layer: Graphical user interface: Phpmyadmin.

2nd layer: Database management system: MySQL, MariaDB.

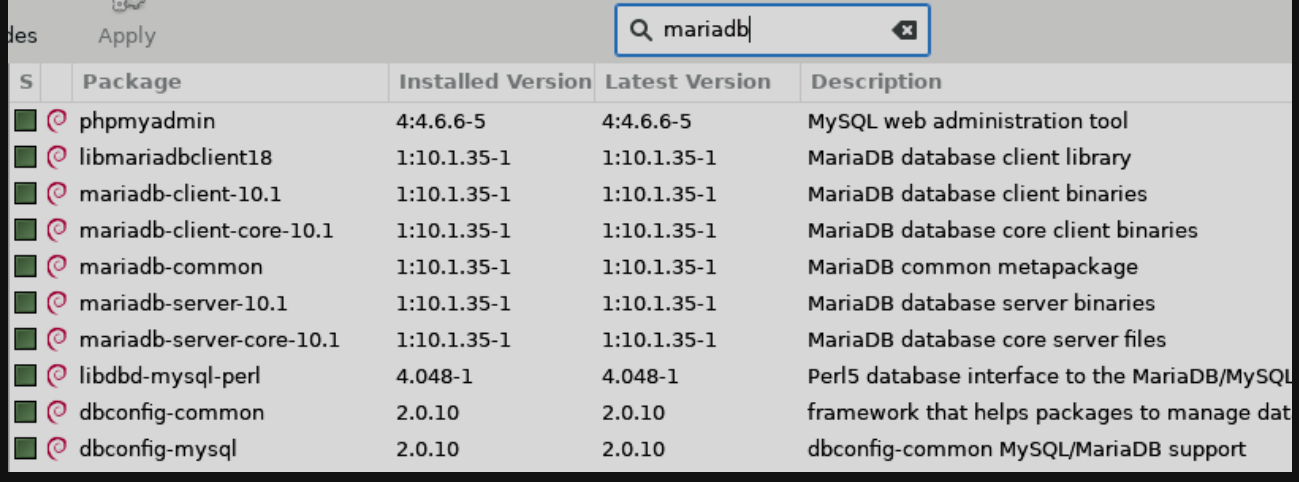
1st layer: Database standard: SQL.

1.A. Installation of mysql / mariadb and phpmyadmin packages with synaptic:

Choose apache2 during the installation of the packages.
You'll be prompted to enter a password for the user 'phpmyadmin'



S	Package	Installed Version	Latest Version	Description
	akonadi-backend-mysql	4:18.08.1-1	4:18.08.1-1	MySQL storage backend for Akonadi
	libqt4-sql-mysql	4:4.8.7+dfsg-17	4:4.8.7+dfsg-17	Qt 4 MySQL database driver
	phpmyadmin	4:4.6.6-5	4:4.6.6-5	MySQL web administration tool
	mariadb-client-10.1	1:10.1.35-1	1:10.1.35-1	MariaDB database client binaries
	php-mysql	1:7.2+62	1:7.2+62	MySQL module for PHP [default]
	libreoffice-base-drivers	1:6.1.3~rc1-1	1:6.1.3~rc1-1	Database connectivity drivers for LibreOffice
	rsyslog	8.38.0-1+b1	8.38.0-1+b1	reliable system and kernel logging daemon
	php7.2-mysql	7.2.9-1	7.2.9-1	MySQL module for PHP
	libqt5sql5-mysql	5.11.2+dfsg-3	5.11.2+dfsg-3	Qt 5 MySQL database driver
	mysql-common	5.8+1.0.4	5.8+1.0.4	MySQL database common files, e.g. /etc/mysq
	libdbd-mysql-perl	4.048-1	4.048-1	Perl5 database interface to the MariaDB/MySQ
	dbconfig-common	2.0.10	2.0.10	framework that helps packages to manage da
	dbconfig-mysql	2.0.10	2.0.10	dbconfig-common MySQL/MariaDB support
	libdbi-perl	1.641-1	1.641-1	Perl Database Interface (DBI)
	librdf0	1.0.17-1.1	1.0.17-1.1	Redland Resource Description Framework (RDF
	default-mysql-client	1.0.4	1.0.4	MySQL database client binaries (metapackage
	default-mysql-client-core	1.0.4	1.0.4	MySQL database core client binaries (metapac
	default-mysql-server	1.0.4	1.0.4	MySQL database server binaries and system d
	default-mysql-server-core	1.0.4	1.0.4	MySQL database server binaries (metapackage



1.B. Reboot and run 'mysql_secure_installation'

The program mysql_secure_installation allows to configure MySQL/MariaDB in order to improve its security.

Running mysql_secure_installation

```
sudo mysql_secure_installation
password: (Enter your linux password)

Enter current password for root (enter for none): (Press enter. Note that this is the root user of the database)

Set root password? [Y/n] y
New password: (Write a password)

Remove anonymous users? [Y/n] y

Disallow root login remotely? [Y/n] y

Remove test database and access to it? [Y/n] y

Reload privilege tables now? [Y/n] y
```

More on mysql_secure_installation:
https://mariadb.com/kb/en/library/mysql_secure_installation/

1.C. Basic commands.

In order to be able to log in to mysql/mariadb as root user, open the terminal and run:

```
sudo mysql -h localhost -u root -p
```

First you have to enter your password on Linux. And after that you have to enter the password you have set for the root user of the database.

This is the shell:

```
MariaDB[(none)]>
```

When you want to exit:

```
MariaDB [mysql]> exit;
Bye
```

Some basic commands to start/stop mysql and apache2 servers:

MYSQL SERVER

```
sudo service mysql start
sudo service mysql stop
sudo service mysql restart
```

APACHE2 SERVER

```
sudo service apache2 start
sudo service apache2 stop
sudo service apache2 restart
```

1.D. When you try to log in to phpmyadmin using the user ‘root’ you may get this error message: 1698 - Access denied for user 'root'@'localhost'

You may solve this problem by granting privileges to the user ‘phpmyadmin’. So at least you can log in to phpmyadmin with the user ‘phpmyadmin’ and perform administrative tasks (create databases, etc). In order to do this follow these steps:

Open the terminal and run this command:

```
sudo mysql -h localhost -u root -p
```

First enter your password on Linux. And after that enter the password you’ve set for the root user of the database.

After that, proceed with this:

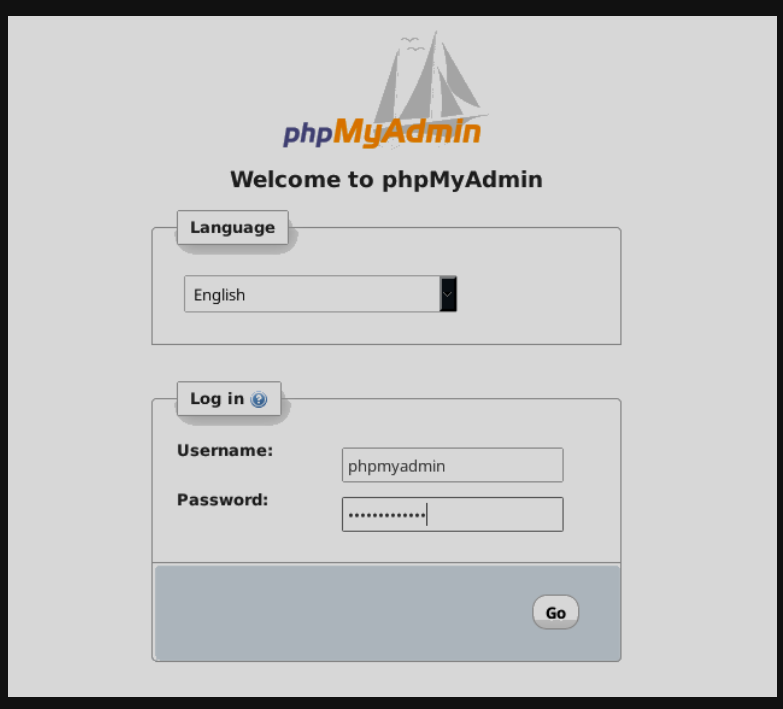
```
MariaDB [(none)]>SELECT User, Host, plugin FROM mysql.user;

+------------+-----------+-------------+
| User       | Host      | plugin      |
+------------+-----------+-------------+
| root       | localhost | unix_socket |
| phpmyadmin | localhost |             |
+------------+-----------+-------------+
```

As you can see in this example, there are 2 users of the database, root and phpmyadmin. Let’s grant administrative privileges to the phpmyadmin user:

```
MariaDB [(none)]>GRANT ALL PRIVILEGES ON *.* TO 'phpmyadmin'@'localhost';
MariaDB [(none)]>FLUSH PRIVILEGES;
MariaDB [(none)]>exit;
```

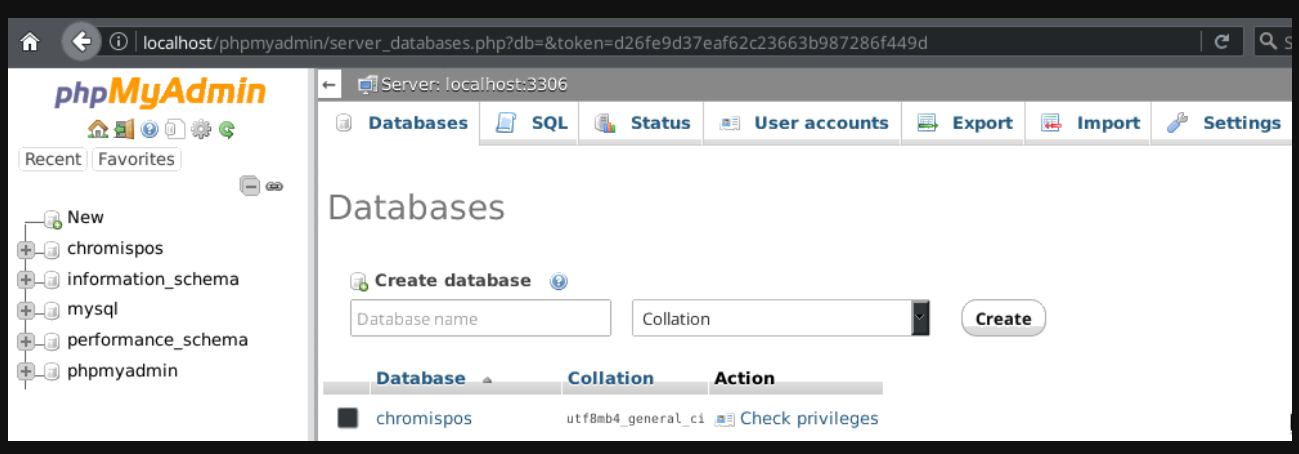
More on the GRANT command: https://mariadb.com/kb/en/library/grant/

Now you can log in to phpmyadmin with the user 'phpmyadmin' with administrative privileges (you can create databases, etc)



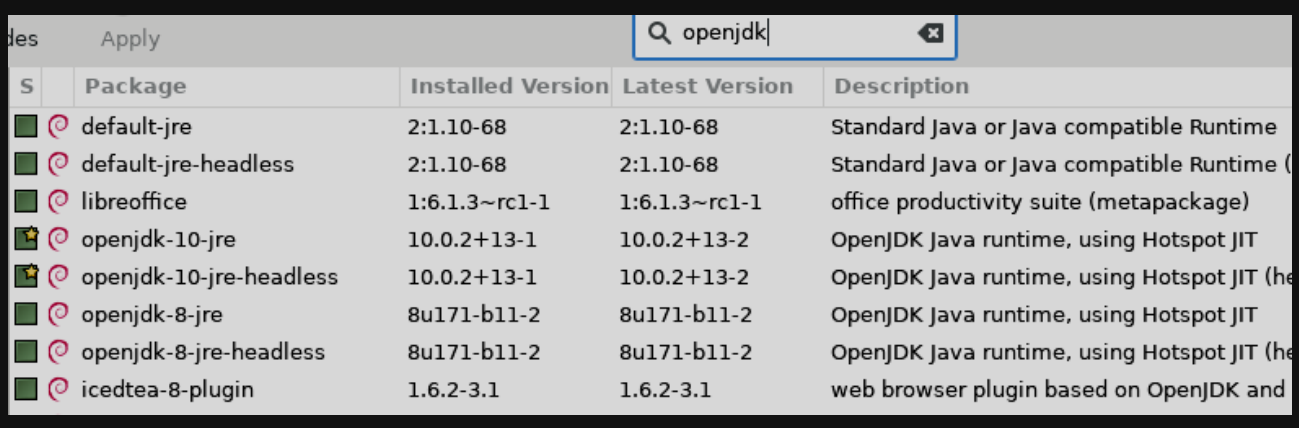
1.E. Creation of database for Chromis POS.

Log in to phpmyadmin and create a database called ‘chromispos’.



2. INSTALLATION OF JAVA LIBRARIES

Make sure ‘openjdk’ and other libraries are installed. You’ll probably have to install the ‘icedtea’ plugin as well. In principle, this could be enough to make Chromis POS work.



However, **if you prefer java libraries from Oracle,** you have to remove ‘openjdk’ and ‘icedtea’ packages and install the java libraries from Oracle. In order to install java from Oracle, please read the installation manual published by Chromis:
https://sourceforge.net/projects/chromispos/files/User%20Guides/Linux%20Installation%20-%20Guide.pdf/download

3. EXECUTION OF CHROMIS POS INSTALLER.

· Download the Chromis POS installer.
https://sourceforge.net/projects/chromispos/files/Linux/

· Go to the the folder where the installer was downloaded and make the installation file executable:
Select the file → Properties → Permissions → Executable.

· Open the terminal. Go to the folder where you put the installation file and execute the installer. For example, if the name of the installer is ‘`chromispos-0.58.5.7a-linux-x64-installer.run`’ and you put the installation file in the Downloads folder:

```
cd Downloads
sudo ./chromispos-0.58.5.7a-linux-x64-installer.run
```

· You’ll be asked to select the installation folder and the database engine:

Installation directory: /opt/chromispos

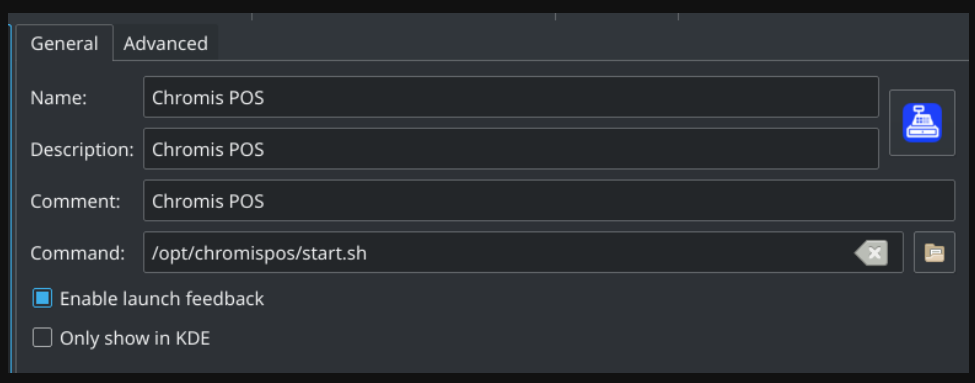
Database engine: mysql

Finish the installer.

· You can directly start now chromis pos by clicking on opt/chromispos/start.sh

However, you might want to execute it from your application launcher. This is how to do it if you are using KDE:

Right-click on the KDE launcher → Edit applications → New item
Name: ‘Chromis POS’
Command: /opt/chromispos/start.sh
Work path: /opt/chromispos/
You can also select an icon. You can select the icon located at: /opt/chromispos/pos.ico
Save the changes.



4. DATABASE SETUP

· Start Chromis POS.

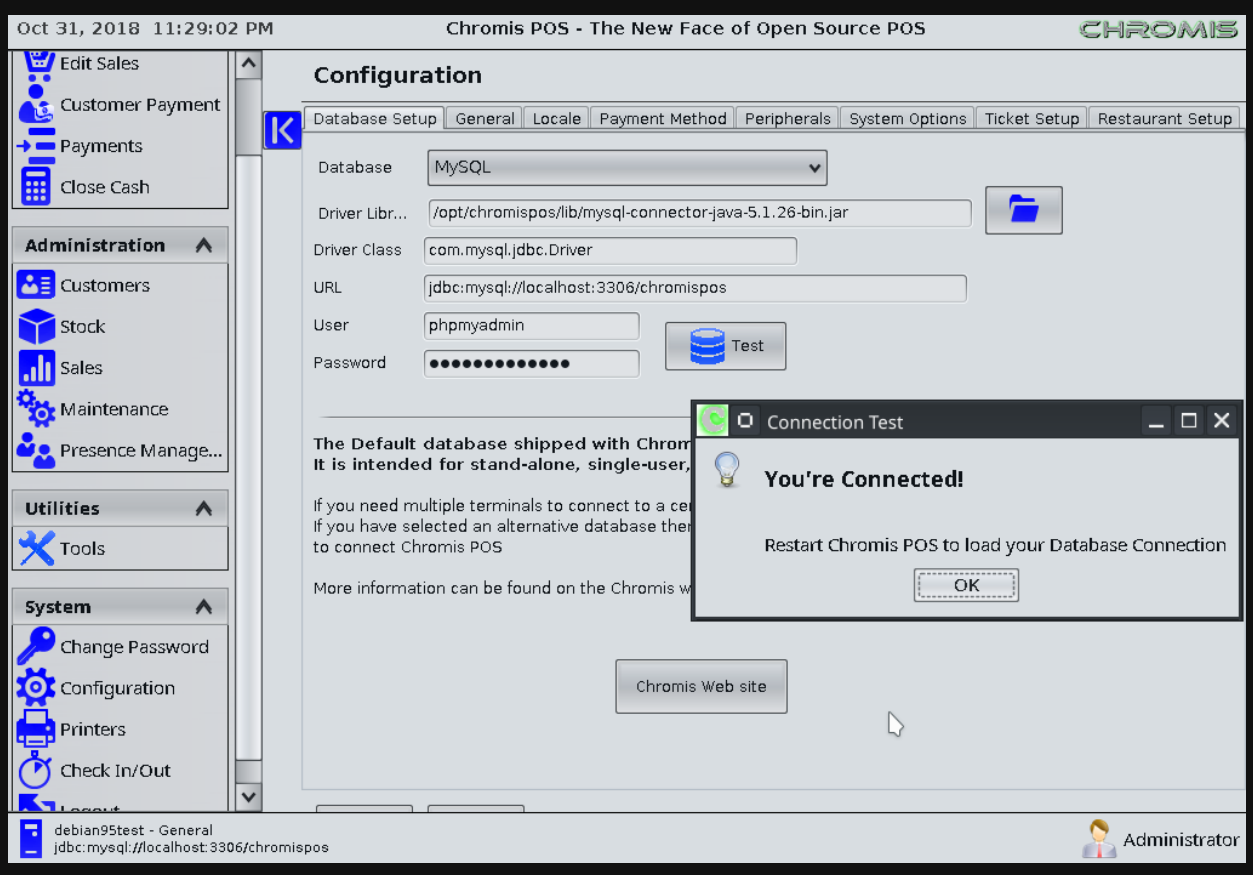
You'll probably get this first message: "A working dadabase cannot be detected. A default database will be created. Do you want to continue?"

Select 'Yes'. The program will create a Derby database and start. A derby database should be more than enough for a small business. However, we are trying to use MySQL now.

· As an administrator, Go to **configuration** and change it:

Database: MySQL
Driver Library: /opt/chromispos/./lib/mysql-connector-java-5.1.26-bin.jar
Driver Class: com.mysql.jdbc.Driver
URL: jdbc:mysql://localhost:3306/chromispos
User: phpmyadmin
Password: (enter the password for phpmyadmin)

Click on 'test' to make sure there is a valid connection with the database.
If successful, you'll get the message: "You are connected! Restart Chromis POS to load your database connection".
Click on 'Save' and restart the program.



Once you restart Chromis POS again you may get the same error message about 'no database'. Then click on 'Yes' anyway. If you go to configuration, the MySQL configuration you set before will probably be there. Restart the program again and you shouldn't get more starting errors and you should be able to use the MySQL database.

Final note: If you need to uninstall chromis pos, then run these commands:

```
cd /opt/chromispos
sudo ./uninstall
```

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by Icavot